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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/662,558      | 09/15/2003  | Thomas Lane Fowler   | TI-35367.1          | 9746             |

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EXAMINER

STERRETT, JEFFREY L

ART UNIT PAPER NUMBER

2838

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                 |                              |  |
|------------------------------|---------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/662,558   | Applicant(s)<br>FOWLER ET AL |  |
|                              | Examiner<br>Jeffrey L. Sterrett | Art Unit<br>2838             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/15/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the low side device comprising a bipolar device as recited by claim 4 must be shown or the feature canceled from the claim. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Claim 15 is objected to because in line 1 –the- should be inserted after "wherein". Appropriate correction is required.

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-13, 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Bazinet et al.

Bazinet et al discloses a buck regulator switching power supply comprising a switching power supply circuit (10) having an input ( $V_{in}$ ) and an output ( $V_{out}$ ), a high side FET (12), a low side device (14), a bootstrap capacitor (26), and a controller (30) sensing the bootstrap capacitor voltage ( $V_b$ ).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bazinet et al.

Bazinet et al teaches a buck regulator switching power supply as recited by claim 4 except for utilizing a bipolar device as the low side device. Official notice is taken that utilizing a bipolar device or a FET device as a power switch in a buck regulator switching power supply were both equally old and known expedients in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the

time of the invention to have modified the buck regulator switching power supply of Bazinet et al by utilizing a bipolar device as the low side device in order to take advantage of the known benefits and operating characteristics of bipolar devices.

7. Claims 14-16 and 21-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bazinet et al.

Bazinet et al teaches a buck regulator switching power supply as recited by claims 14-16 and 21-23 except for specifying that the input to output ratio is 95%, at least 97%, or 99%. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the buck regulator switching power supply of Bazinet et al by specifying that the input to output ratio is 95%, at least 97%, or 99% since it has been held that where the general conditions of a recited invention are disclosed by the cited prior art, discovering the optimum or workable or some desired value or range of values for a result effective variable involves only routine skill in the art.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Borghi et al (US 6,037,760) is cited to show another prior art buck regulator switching power supply similar to the recited invention.

Grant (US 6,172,493 and 6,812,782), Moriconi et al (US 6,489,758), Kohout et al (US 6,650,100), and Stone (US 6,897,643) are cited to show buck regulator switching power supplies old and known in the art at the time of the invention.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Sterrett whose telephone number is (571) 272-2085. The examiner can normally be reached on Monday-Thursday & 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeffrey L. Sterrett  
Primary Examiner  
Art Unit 2838

A handwritten signature in black ink, appearing to read "Jeff Sterrett", written in a cursive style.